

REMARKS

Claims 1-12 are now pending in the present application. Claims 1-8 have been amended and claims 9-12 have been added. Claims 1 and 3 are independent. Reconsideration of this application, as amended, is respectfully requested.

Objection to the Drawings

The drawings stand objected to under 37 C.F.R. § 1.83(a) because they fail to show belt 14 as described in the specification. As the Examiner will note, FIGS. 6(a) and 6(b) have been added for the Examiner's consideration. FIGS. 6(a) and 6(b) are views showing a belt 14 for use in a continuously variable transmission. Applicants respectfully submit that FIG. 1, which includes reference numeral 14 in conjunction with the present specification are sufficient to provide support for additional FIGS. 6(a) and 6(b). Specifically, FIG. 1 has been described at page 1, last paragraph through page 2, first full paragraph as including a plurality of elements 1 that are stacked in their transverse direction into an annular form, and which include endless rings 13 inserted into recesses 3 and 4 of each of the elements 1 to bundle the elements 1 into a belt 14. Since the belt 14 is the same as a belt 14 according to the background art, Applicants respectfully submit that the addition of FIGS. 6(a) and 6(b) do not constitute new matter. One having ordinary skill in the art would readily recognize the belt 14 as a belt used in the Background Art for use in a continuously variable transmission.

In view of the above amendments and remarks, Applicants respectfully submit that the drawings are in proper form. Accordingly, reconsideration and withdrawal of the Examiner's drawing objection are respectfully requested.

Objection to the Specification

The specification stands objected to for several minor informalities. As the Examiner will note, the specification has been carefully reviewed and revised, taking into consideration the specific deficiencies pointed out by the Examiner. Applicants submit that the specification objection has therefore been obviated.

Objection to the Claims

Claim 8 stands objected to for a minor informality. As the Examiner will note, claim 8 has been amended in the manner suggested by the Examiner. Accordingly, the claim objection has been obviated.

Rejection Under 35 U.S.C. § 103

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Goodrich et al., USPN 5,823,356 in view of Mahdavi et al., USPN 5,345,514. This rejection is respectfully traversed.

The present invention is directed to a method of sorting out defect-free workpieces or elements blanked out of a metal sheet. Independent claim 1 is directed to the method of sorting out defect-free workpieces blanked out of a metal sheet, while independent claim 3 is directed to a method of sorting out defect-free elements blanked out of a metal sheet.

With regard to independent claim 1, this claim recites a combination of steps including "inserting the workpieces into a passage," "analyzing respective images of the workpieces which have passed through said passage to compare the images with a reference workpiece image, reject workpieces which have a portion different from said reference workpiece image, and sort out other workpieces" and "applying a gauge having a shape complementary to a required shape for a functional portion of the workpieces, to the workpieces which have been sorted out, and sorting out those workpieces whose functional portion has a shape complementary to the shape of said gauge, as defect-free workpieces."

Independent claim 3 of the present invention recites a combination of steps including "inserting the elements into a passage," "analyzing respective images of the elements which have been delivered to said feedpath while in said feedpath" and "passing the arrayed elements through a gauge having a shape complementary to a required shape for the recesses of the elements."

In view of the above, independent claims 1 and 3 recite a method of sorting out defect-free elements blanked out of a metal sheet which recite a combination of steps in the order of:

1. Inserting the workpieces into a passage;
2. Analyzing the images of the workpieces; and
3. Applying a gauge having a shape complementary to a required shape for a functional portion of the workpieces.

Independent claim 1 of the present invention recites the above order of the individual steps, since the step of analyzing specifically states that the workpieces which have passed through the passage are analyzed and the step of applying a gauge specifically states that the gauge is applied to the workpieces which have been sorted out, i.e., the workpieces which have been sorted out in the step of analyzing.

With regard to claim 3, this claim recites the individual steps in the above-mentioned order, since the step of analyzing specifically states that the analyzing is performed on elements which have been delivered to said feedpath, i.e., delivered to the feedpath recited in the step of inserting. In addition, the step of passing specifically states that the passing is performed on the arrayed elements, i.e., the elements that are stacked and arrayed in the step of stacking.

Applicants respectfully submit that the references relied on by the Examiner fail to teach or suggest the presently claimed invention. In order to adopt such an order of steps,

it is necessary to first have a finding that the most frequent defect of the workpieces or elements is profile deformation. It is also necessary to have a finding that the next most frequent defect of the workpieces or elements is entrapped foreign matter and partial broken-off regions. Finally, it is necessary to have a finding that the next most frequent defect of the workpieces or elements is a defect which includes outer profile deformations of the recesses. The Examiner is directed to page 4, lines 14-23 of the original specification which describes that Applicants have determined which types of defects are more common than others, and have determined the most appropriate way to sort out defect-free workpieces is in the manner recited in the independent claims of the present invention.

With regard to the Goodrich et al. and Mahdaviéh et al. references, neither of these references teaches the frequency of each of the above types of defects. In view of this, Goodrich et al. and Mahdaviéh et al. fail to suggest the particular order of the steps recited in the independent claims of the present invention, since there is no teaching in these references concerning the priority of each of the tests for individual defects.

In the present invention, workpieces judged as being defective can be sorted out as soon as possible in order to obtain a superior effect. This effect cannot be obtained from Goodrich et al. or Mahdaviéh et al., which lack a statement concerning the frequency of each type of the defect, or a statement concerning a priority order of each of the tests of the

defects. In view of this, Applicants submit that the method of the present invention is not obvious over the Goodrich et al. or Mahdavi et al. references alone or in combination.

In addition to the above, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness. At paragraph 5 of the Examiner's Office Action, the Examiner states that it would have been obvious to modify the check of the dimensional characteristics disclosed by Goodrich et al. to include using a passage to check the predetermined width because it is an alternative method to separate rejects from acceptable parts. The Examiner takes Official Notice of this teaching. Applicants respectfully submit that in order to establish a *prima facie* case of obviousness, the Examiner must show that the prior art suggests the modification proposed by the Examiner. Applicants also submit that the Examiner must consider the references as a whole. In Goodrich et al., the threaded fasteners T are tested by using laser sensing devices. Such devices are used in order to have very precise dimensional measurements in order to determine if a particular threaded fastener is defective. Applicants respectfully submit that the Examiner's modification of Goodrich et al. is improper since using a passage to check the predetermined width would not be as precise as the laser sensing device of the Goodrich et al. device and therefore the passage would not be able to operate in the manner intended in Goodrich et al. In view of this, the Examiner's modification would be non-obvious.

In addition, with regard to the Examiner's taking of Official Notice, Applicants request the Examiner to provide a reference that teaches it is well known to insert a workpiece into a passage in order to take a predetermined width. In addition, if there is such a teaching, it is requested that the Examiner also provide a suggestion of why it would be obvious to specifically modify Goodrich et al. in the manner suggested by the Examiner, taking into consideration the fact that Goodrich et al. uses a very precise laser measuring device in order to determine dimensional characteristics of the threaded fastener.

With specific regard to independent claim 3, this claim recites that each of the elements has a body and a head joined to the body with a pair of recesses defined therebetween. In addition, claim 3 recites that the elements are stacked in a transverse direction thereof into annular form and bundled together by an assembly of stacked endless metal rings inserted into the recesses in order to form a belt for use in a continuously variable transmission. Applicants submit that the references relied on by the Examiner fail to teach this aspect of the present invention as well. Goodrich et al. is directed to an apparatus and method for inspecting threaded members, while Mahdavi et al. is directed to a method for inspecting components having complex geometric shapes. There is no indication in either of these references that the elements are bundled together to form a belt for use in a continuously variable transmission. In addition, neither of the references disclose elements having a body and a head joined to the body with a pair of recesses

defined therebetween as recited in independent claim 3 of the present invention. Accordingly, the Examiner's rejection is improper for this additional reason.

With regard to dependent claims 2 and 4-8, Applicants respectfully submit that these claims are allowable due to their respective dependence upon allowable independent claims 1 and 3, as well as due to the additional recitations in these claims.

In view of the above remarks, Applicants respectfully submit that claims 1-8 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 103 are respectfully requested.

Additional Claims

Additional claims 9-12 have also been added for the Examiner's consideration. Applicants respectfully submit that these claims are allowable due to their dependence upon allowable independent claim 1, as well as due to the additional recitations in these claims.

Favorable consideration and allowance of additional claims 9-12 are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

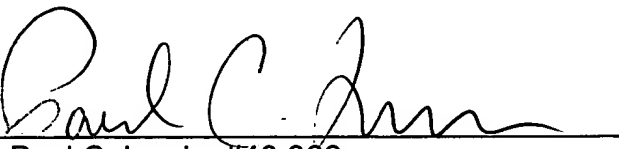
It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By 
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PCL/cl
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Attachment(s)

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